



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,470	07/31/2003	Robert Kincaid	10020348-1	5138

7590 03/21/2008
AGILENT TECHNOLOGIES, INC.
Legal Department, DL 429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

BRUSCA, JOHN S

ART UNIT	PAPER NUMBER
----------	--------------

1631

MAIL DATE	DELIVERY MODE
-----------	---------------

03/21/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/633,470

Applicant(s)

KINCAID ET AL.

Examiner

John S. Brusca

Art Unit

1631

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Status of the Claims

1. Claims 1-7, 9, and 10 are pending.

Claims 1-7, 9, and 10 are rejected.

Claim Rejections - 35 USC § 112

2. The rejection of claims 1-7 and 9 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention in the Office action mailed 18 September 2007 is withdrawn in view of the amendment filed 18 December 2007.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U.S. Patent Application Publication No. 2002/0052882 A1) in view of Nova et al. (U.S. Patent No. 6,017,496).

The claims are drawn to a virtualizing microarray system comprising a microarray comprising a memory element that contains data of the microarray features and instructions that generate data of a subset of the data of the microarray features. In some embodiments the virtual microarray comprises data concerning the position of the elements of the microarray, the type of probe in the microarray, the target molecule of the probe of the microarray, and the function, process, and cellular component of the element of the microarray. In some embodiments the virtual microarray is made by removing features of the microarray. In some embodiments the virtual microarray comprises data concerning molecules whose synthesis is directed by the molecule that binds to a probe in the microarray.

Taylor shows a virtual microarray in page 1 in which correspondence between positions of a physical microarray and the virtual microarray are known. Taylor shows deletion of data from the microarray when creating the virtual microarray in page 2, paragraphs 28 and 29, and page 3 paragraph 34. Taylor shows virtual microarrays that comprise data related to elements of the microarray on pages 6-9, including information about the probe, and the gene and tissue from which it was derived. Taylor does not show a memory element that contains data of the microarray features and instructions that generate data of a subset of the data of the microarray features. Taylor does not show data concerning molecules whose synthesis is directed by the molecule that binds to a probe in the microarray.

Nova et al. shows in the abstract an array comprising a memory comprising data. In columns 6 and 8 Nova et al. shows that the array memory may comprise data of the nucleic acids in the array. In column 13, Nova et al. shows that the memory may contain data of molecules that are synthesized by the array. In columns 13-14 Nova et al. shows that arrays with memory are useful to track or identify molecules that interact with the array in various types of assays.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the virtual array of Taylor by use of the array with memory of Nova et al. because Nova et al. shows that their array with memory is useful to track or identify molecules that interact with the array. It would have been further obvious to include instructions in the memory of the array to use subsets of the array because Taylor shows instances in which only a portion of the data is of interest and recording instructions to use portions of an array for different purposes would allow the virtual array of Taylor to select the data of the array that is of interest.

6. Claims 1, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Nova et al. as applied to claims 1-6 above, and further in view of Ramdas et al.

The claims are drawn to a virtual microarray system comprising a subset of data of a microarray. In some embodiments the virtual microarray is made by a scanner, a data processing system, or a visualization system.

Taylor in view of Nova et al. as applied to claims 1-6 above does not show a virtual microarray made by a scanner and a data processing and visualization system.

Ramdas et al. shows three systems that allow for automated analysis of microarrays that comprise scanners and computer controlled visualization systems in the abstract and throughout.

Ramdas et al. conclude on page 552 that all three systems provide useful and comparable outputs of data from a microarray.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Taylor in view of Nova et al. as applied to claims 1-6 above by use of any of the scanners of Ramdas et al. because Ramdas et al. shows that the scanners allow for automation and useful determinations of the data in a microarray.

Response to Arguments

7. Applicant's arguments filed 18 December 2007 have been fully considered but they are not persuasive. The applicants state that Taylor fails to show a subset of data from a single microarray, however Taylor shows using a portion of the data of a single microarray at least in paragraphs 28, 29, and 34.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Brusca whose telephone number is 571 272-0714. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie A. Moran can be reached on 571-272-0720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John S. Brusca/
Primary Examiner
Art Unit 1631

jsb